

IN THE CLAIMS:

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~strikethrough~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

1. (previously presented) A computer readable storage medium encoded with a computer program when executed by the computer causing the computer to perform a service managing method accommodating a plurality of service servers each rendering a service via a network in response to a service request from a client, and distributing the service request to the plurality of service servers, said method comprising:

managing the plurality of service servers by dividing the service servers to define a plurality of groups of service servers depending on quality levels of rendered services, and an intermediate server group of service servers which offer low level service among the service servers at a normal time and dynamically shift service servers among the plurality of groups and render a service as a service quality of a group to which the shift is made; and

reducing a load on a service server within any of the plurality of groups by using at least one service server with the lightest load within the intermediate server group as the service server within any of the plurality of groups, when the load on the service server within any of the plurality of groups increases, and a quality level to be rendered by any of the plurality of groups cannot be maintained, wherein the service request with a high service level requirement is preferentially processed while still processing service requests of a low service level requirement.

2. (previously presented) The computer readable medium according to claim 1, wherein

the plurality of service servers that are grouped comprise a storing unit storing information to which group each of the plurality of service servers belongs.

3. (previously presented) The computer readable medium according to claim 1, wherein

a service quality is a response time of the service servers.

4. (previously presented) The computer readable medium according to claim 1, said method further comprising:

recording and managing a log of service requests; and
generating a schedule for each date or each day of the week based on the log recorded in the log managing step, and changing a way of dividing the service servers into groups according to a generated schedule.

5. (previously presented) The computer readable medium according to claim 1, wherein:

each of the plurality of service servers executes a load measuring step measuring a load value that a local server requires to process a service request; and

a service server within the intermediate server group is shifted to a different group based on a load value of each service server, which is notified from the load measuring step.

6. (previously presented) A service managing method accommodating a plurality of service servers each rendering a service via a network in response to a service request from a client, and distributing the service request to the plurality of service servers, comprising:

managing the plurality of service servers by dividing the service servers to define a plurality of groups of service servers depending on quality levels of rendered services, and an intermediate server group of service servers which offer low level service among the service servers at a normal time and dynamically shift service servers among the plurality of groups and render a service as a service quality of a group to which the shift is made; and

reducing a load on a service server within any of the plurality of groups by using at least one service server within the intermediate server group as the service server within any of the plurality of groups, when the load on the service server within any of the plurality of groups increases, and a quality level to be rendered by any of the plurality of groups cannot be maintained, wherein the service request with a high service level requirement is preferentially processed while still processing service requests of a low service level requirement.

7. (previously presented) A computer readable storage medium encoded with a computer program when executed by the computer causing the computer to perform a service managing method accommodating a plurality of service servers each rendering a service via a network in response to a service request from a client, and distributing the service request to the plurality of service servers, said method comprising:

managing the plurality of service servers by dividing the service servers to define a plurality of groups of service servers depending on quality levels of rendered services, and an intermediate server group of service servers which offer low level service among the service servers at a normal time and dynamically shift service servers among the plurality of groups and render a service as a service quality of a group to which the shift is made; and

reducing a load on a service server within any of the plurality of groups by using at least one service server within the intermediate server group as the service server within any of the plurality of groups, when the load on the service server within any of the plurality of groups increases, and a quality level to be rendered by any of the plurality of groups cannot be maintained, wherein the service request with a high service level requirement is preferentially processed while still processing service requests of a low service level requirement.

8. (previously presented) A storage medium encoded with a program readable by an information processing device, when executed by the information processing device causing the information processing device to perform a service managing method accommodating a plurality of service servers each rendering a service via a network in response to a service request from a client, and distributing the service request to the plurality of service servers, said method comprising:

managing the plurality of service servers by dividing the service servers to define a plurality of groups of service servers depending on quality levels of rendered services, and an intermediate server group of service servers which offer low level service among the service servers at a normal time and dynamically shift service servers among the plurality of groups and render a service as a service quality of a group to which the shift is made; and

reducing a load on a service server within any of the plurality of groups by using at least one service server within the intermediate server group as the service server within any of the plurality of groups, when the load on the service server within any of the plurality of groups increases, and a quality level to be rendered by any of the plurality of groups cannot be maintained, wherein the service request with a high service level requirement is preferentially processed while still processing service requests of a low service level requirement.

9. (previously presented) A service managing apparatus accommodating a plurality of service servers each rendering a service via a network in response to a service request from a client, and distributing the service request to the plurality of service servers, comprising:

a managing unit managing the plurality of service servers by dividing the service servers to define a plurality of groups of service servers depending on quality levels of rendered services, and an intermediate server group of service servers which offer low level service among the service servers at a normal time and dynamically shift service servers among the plurality of groups and render a service as a service quality of a group to which the shift is made; and

an intermediate server shifting unit reducing a load on a service server within any of the plurality of groups by using at least one service server with the lightest load within the intermediate server group as the service server within any of the plurality of groups, when the load on the service server within any of the groups increases, and a quality level to be rendered by any of the plurality of groups cannot be maintained, wherein the service request with a high service level requirement is preferentially processed while still processing service requests of a low service level requirement.

10. (previously presented) A quality of service system providing services over at least one network, comprising:

service servers grouped according to quality levels of the services provided, including a group of intermediate service servers offering low level service at a normal time, wherein a service request with a high service level requirement is preferentially processed while still processing service requests of a low service level requirement.

11. (previously presented) The system as claimed in claim 10, further comprising a load shifting unit reducing a load on a selected server within any group of said service servers.

12. (previously presented) The system as claimed in claim 11, wherein said load shifting unit reduces the load on the selected server by shifting a portion of the load from the selected server to at least one intermediate server having a lightest load among the intermediate servers.

13. (previously presented) A method of load balancing with preferential processing of service requests made by application clients to application running on networked computers, the method comprising:

dividing the servers into groups of servers based on service level requirements of an application group, a group of mid-level servers alternatively used for lower priority applications and higher level applications as needed; and

dynamically transferring a server of the mid-level server group with the lowest load to a group of servers with a highest service level requirement requiring additional throughput while maintaining a minimum throughput to the lower priority applications.